MARKED UP VERSION OF CLAIMS

1   1.   (Amended) A method for performing a database operation, comprising the

2   computer-implemented steps of:

3   receiving**, at a database server,**[1] a database query that specifies an operation for

4   manipulating data;

5   in response to receiving said database query, **the database server executing the query**

6   **by**[2] performing ~~the~~[3] steps ~~of,~~[4]**that include:**[5]

7   retrieving data from a relational structure;

8   storing the data in a non-relational structure that can be addressed as a multi-dimensional

9   array; and

10   performing said operation specified in the database query on said data.

1   2.   (Not Amended) The method of Claim 1, wherein the step of storing the data

2   in a structure comprises the step of storing the data in a structure that can be

3   symbolically addressed as an n-dimensional array.

1   3.   (Not Amended) The method of Claim 1, further comprising the step of

2   presenting in tabular format results from performing said operation.

1   4.   (Not Amended) The method of Claim 1, wherein the step of performing said

2   operation comprises the step of automatically reordering the specified

3   operations to allow the operation to be correctly performed on said data

4   stored in said non-relational structure.

1   5.   (Not Amended) The method of Claim 1, wherein the step of performing said

2   operation comprises the step of aggregating over a set of data information

3   contained in multiple cells of said non-relational structure.

1   6.   (Not Amended) The method of Claim 1, wherein the step of performing said

2   operation comprises the step of repeatedly performing a series of

3   manipulations on said data until a particular criterion is satisfied.

1   7.   (Amended) A method for processing database query operations, comprising

2   the computer-implemented steps of:

3   ~~in response to[6]~~**a database server**[7] receiving a database query that ~~specifies an operation~~

4   ~~for manipulating data[8], performing the steps of,[9]~~**:**[10]

5   ~~referencing[11]~~**references**[12] data in a relational structure as if the data was stored in

6   a multi-dimensional array~~;~~[13]**,**[14] **and**[15]

7   ~~retrieving the data from said relational structure; and~~[16]

8   **specifies an operation for manipulating data**[17]**; and**[18]

9   **in response to**[19] **receiving said database query the database server executing the**

10   **query by performing steps that include:**[20]

11   **retrieving the data from said relational structure;** [21]

12   performing said operation previously specified in said database query.[22]

1   8.   (Amended) The method of Claim 7, wherein:

2   the step of receiving a database query ~~that specifies an operation~~[23]comprises the step of

3   receiving a ~~multi-dimensional array operation; and~~[24]~~the step of referencing data~~

4   ~~in~~[25]**database query that specifies**[26] a~~relational structure comprises the step of~~

5   ~~referencing said data using said~~[27] multi-dimensional array operation.

1   9.   (Not Amended) The method of Claim 7, wherein the step of retrieving the

2   data comprises the step of retrieving the data from one or more relational

3   database tables.

1   10.   (Not Amended) The method of Claim 7, further comprising the step of

2   storing said data in a non-relational structure; and

3   wherein the step of performing said operation comprises the step of performing said

4   operation in reference to said data stored in said non-relational structure.

1   11.   (Not Amended) The method of Claim 7, wherein the step of performing said
2   operation comprises the step of repeatedly performing a series of
3   manipulations on said data until a particular criteria is satisfied.

1   12.   (Amended) A method for processing database query operations, comprising
2   the computer-implemented steps of:
3   ~~in response to~~[28]**a database server**[29] receiving a database query that specifies an operation
4   for manipulating data~~,~~[30]**; and**[31]
5   ~~in response to~~[32] **receiving the database query, the database server**[33] performing the
6   steps of~~,~~[34]**:**[35]
7   retrieving a first set of data from a first relational structure;
8   storing the first set of data in a non-relational structure; and
9   manipulating the first set of data by performing the operation previously specified
10   in the database query.

1   13.   (Not Amended) The method of Claim 12, wherein the step of retrieving a
2   first set of data from a first relational structure comprises the step of
3   retrieving said first set of data from a relational database.

1   14.   (Not Amended) The method of Claim 13, wherein the step of retrieving said
2   first set of data from a relational database comprises the step of retrieving
3   said first set of data from one or more tables within said a relational
4   database.

1   15.   (Not Amended) The method of Claim 12, wherein the step of storing the
2   first set of data in a non-relational structure comprises the step of storing the
3   first set of data within a spreadsheet application.

1   16.   (Not Amended) The method of Claim 12, wherein the step of storing the
2   first set of data in a non-relational structure comprises the step of storing the
3   first set of data in a non-relational database application.

1   17.   (Not Amended) The method of Claim 12, wherein the step of storing the
2   first set of data in a non-relational structure comprises the step of storing the
3   first set of data within an n-dimensional array data structure.

1   18.   (Amended) The method of Claim 12, wherein the step of manipulating the
2   first set of data comprises the steps of symbolically addressing the first set
3   of data as **an** [36]n-dimensional array information.

1   19.   (Not Amended) The method of Claim 12, further comprising the step of,
2   after performing the step of manipulating the first set of data, storing in a
3   second relational structure, result information based on performance of said
4   operation.

1   20.   (Not Amended) The method of Claim 12, wherein the step of manipulating
2   the first set of data comprises the step of repeatedly performing a series of
3   manipulations on said first set of data until a particular criteria is satisfied.

1   21.   Cancelled.
1   22.   Cancelled.
1   23.   Cancelled.
1   24.   Cancelled.
1   25.   Cancelled.
1   26.   Cancelled.
1   27.   Cancelled.
1   28.   Cancelled.
1   29.   Cancelled.
1   30.   Cancelled.
1   31.   Cancelled.
1   32.   Cancelled.
1   33.   Cancelled.
1   34.   Cancelled.
1   35.   Cancelled.

1   36.   Cancelled.

1   37.   Cancelled.

1   38.   Cancelled.

1   39.   Cancelled.

1   40.   Cancelled.

1   41.   (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 1.

1   42.   (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 2.

1   43.   (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 3.

1   44.   (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 4.

1   45.   (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 5.

1 46. (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 6.

1 47. (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 7.

1 48. (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 8.

1 49. (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 9.

1 50. (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 10.

1 51. (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 11.

1 52. (New) A computer-readable medium carrying one or more sequences of

2 instructions which, when executed by one or more processors, causes the

3 one or more processors to perform the method recited in Claim 12.

1 53. (New) A computer-readable medium carrying one or more sequences of

2 instructions which, when executed by one or more processors, causes the

3 one or more processors to perform the method recited in Claim 13.

1 54. (New) A computer-readable medium carrying one or more sequences of

2 instructions which, when executed by one or more processors, causes the

3 one or more processors to perform the method recited in Claim 14.

1 55. (New) A computer-readable medium carrying one or more sequences of

2 instructions which, when executed by one or more processors, causes the

3 one or more processors to perform the method recited in Claim 15.

1 56. (New) A computer-readable medium carrying one or more sequences of

2 instructions which, when executed by one or more processors, causes the

3 one or more processors to perform the method recited in Claim 16.

1 57. (New) A computer-readable medium carrying one or more sequences of

2 instructions which, when executed by one or more processors, causes the

3 one or more processors to perform the method recited in Claim 17.

1   58.   (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 18.

1   59.   (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 19.

1   60.   (New) A computer-readable medium carrying one or more sequences of

2   instructions which, when executed by one or more processors, causes the

3   one or more processors to perform the method recited in Claim 20.